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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/721,215	11/25/2003	Bhamidipaty K.D.P. Rao	00014DIV(3600-267-02)	5519
7590 11/17/2004				
Martha Ann Finnegan, Esq. Cabot Corporation 157 Concord Road Billerica, MA 01821-7001			EXAMINER JENKINS, DANIEL J	
			ART UNIT 1742	PAPER NUMBER

DATE MAILED: 11/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/721,215

Applicant(s)

RAO ET AL.

Examiner

Daniel J. Jenkins

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 25 November 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 and 3-14 is/are rejected.
- 7) ☒ Claim(s) 2 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 11/25/03.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 1, 3 and 5-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Reichert et al. '779 (Reichert et al.).

Reichert et al. disclose the invention substantially as claimed.

Reichert et al. disclose a method of forming a nitrided valve metal comprising:

providing a tantalum powder (col. 3, lines 15-22);

doping the tantalum powder (col. 3, lines 60-65) at temperatures as low as 650°C (col. 4, lines 28-30) including a degassing step;

deoxidizing the doped tantalum powder (col. 4, lines 16-54); and

sintering at 1500-1300°C to form a sintered tantalum anode (col. 5, lines 7-14).

Reichert et al. further disclose wherein the doping step can be performed with material selected from a group that nitrides the tantalum powder, including nitrogen gas, but provides no specific example of where nitriding precedes deoxidation, thus this is an obvious rejection and not an anticipation.

Reichert et al. further disclose wherein the nitrogen content of the nitrided metal is 100 to 15,000 ppm (col. 3, lines 53-55).

The approximation of the sintering temperature establishing a prima facie case of obviousness, one of ordinary skill in the art selecting a sintering range based on the valve metal including alloy additions of the initial starting materials.

The Examiner finds that the nitriding temperature of claim 9 approximates the range as disclosed by Reichert et al., one of ordinary skill in the art allowing for variations based on the selection of the initial valve metal including alloying additions.

Reichert et al. discloses tantalum powder, but it is known in the art that niobium powder is a valve metal equivalent in the formation of electrodes.

4. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Reichert et al. '779 (Reichert et al.).

Reichert et al. disclose the invention substantially as claimed (see paragraph 3 above).

However, Reichert et al. do not teach doping after sintering, but it is common knowledge in the prior art to dope valve metals before or after sintering in the same field of endeavor in order allow for reaction products to escape during the sintering step.

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It would have been obvious to one having ordinary skill in the art at the time of the invention to dope after sintering in order to allow reaction products to escape during the sintering step and to permit a more complete doping step.


5. Claim 2 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The Examiner finding that the prior art does not teach or make obvious the nitriding taking place at the claimed temperature, the reference to Reichert et al. not being able to be modified since the doping of the additional agents required in Reichert et al. take place at a higher temperature.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel J. Jenkins whose telephone number is 571-272-1242. The examiner can normally be reached on M-TH6:30AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on 571-272-1242. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Daniel J. Jenkins  
Primary Examiner  
Art Unit 1742

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